Viticulture and Viniculture in California. Statements and Extracts From Reports of the Board of State Viticultural Commissioners, Prepared Specially for Distribution at the New Orleans World's Fair, A.D. 1885

CALIFORNIA. BOARD OF STATE VITICULTURAL COMMISSIONERS, CHARLES A WETMORE

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VITICULTURE AND VINICULTURE

IN

CALIFORNIA.

STATEMENTS AND EXTRACTS FROM REPORTS OF THE BOARD OF STATE VITICULTURAL COMMISSIONERS, PREPARED SPECIALLY FOR DISTRIBUTION AT THE NEW ORLEANS WORLD'S FAIR, A. D. 1885.

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No. 204 MONTGOMERY STREET, SAN FRANCISCO, CALIFORNIA.

STATE VITICULTURAL COMMISSION,
OFFICES, No. 204 MONTGOMERY STREET,
SAN FRANCISCO, March 5, 1885.

To his Excellency GEORGE STONEMAN, *Governor of the State of California:*

In accordance with your request, the Board of State Viticultural Commissioners has prepared for publication a brief compilation of statements relating to viticulture and viniculture in California, together with such original matter as was deemed best suited to subserve the end in view, for distribution at the New Orleans World's Fair. Subjects of technical interest have been avoided as uninteresting to the general public

Should this document result in awakening any spirit of inquiry as to questions of special practical interest concerning our industry, whether relating to production or commerce, this Commission will always be at the service of the public when called upon for any information that pertains to the advancement and prosperity of the State.

Respectfully submitted.

ARPAD HARASZTHY, President.

EXTRACTS FROM THE SECOND ANNUAL REPORT

OF

CHARLES A. WETMORE, CHIEF EXECUTIVE VITICULTURAL OFFICER,

TO THE

BOARD OF STATE VITICULTURAL COMMISSIONERS,

PUBLISHED BY THE STATE OF CALIFORNIA.

VITICULTURE CONSIDERED INDUSTRIALLY FROM THE STANDPOINT OF NATIONAL IMPORTANCE.

The relative importance of industries, considered from the standpoint of national stability, growth, and prosperity, depends upon the number of persons that are required to operate them in proportion to area of territory occupied, assuming that the means of alimentation can be procured either from the cultivation of the soil within the limits of the Nation, or by exchanging industrial products for the food of other countries. The study of hygiene, preservation of public peace, control of epidemics, preservation of the unity and purity of family life, and the love and maintenance of children, are consistent only when based upon the assumed capacity of agriculture to sustain life and the multiplication of industries to employ the healthful labor of increasing multitudes. Rapid and economical transportation become necessary for the distribution and exchange of labor products; education, social, intellectual, and æsthetic, coupled with freedom for desire and opportunity, create and maintain the wants that constitute markets. Assuming that agriculture has latent undeveloped resources for development, in proportion as there is poverty, disease, violence, and starvation to diminish the demand for food, the profits and prosperity of the farmer diminish through over production, wasteful competition, and the drain of resources caused by the expense of distant transportations in search of markets. In proportion as the food consumers are free from class degradations, and as they are educated socially, morally, intellectually, and æsthetically, their wants increase, their demands for the fair exchange of labor products multiply, and the food producers prosper and advance apace with civilization. Where agriculture alone is encouraged education languishes, arts perish, labor is miserable, and wealth is controlled by a small class of importers and transportation agencies; in such case also agriculture depends solely upon the precarious and fitful

demands of other countries, the conditions of commerce are beyond the control of the Nation, and the children of the farmer must largely emigrate to more civilized communities; genius, talent, ambition, will not remain in such a land, and freedom will vanish before the arms of invaders and the cupidity of capital.

Let the farmers of this country compare such a picture of purely agricultural development with the other extreme of national existence; compare it with the condition of England, where food is wanting, but where industry has courage, talent, genius, and military and naval power, guided by political sagacity, to forage on strange lands for food supplies. Will they hesitate to choose which of the two evils they would prefer? And will they not in aiding in the development of this great Nation, aim to create an industrial and civilized England within an agricultural America?

Our inevitable national policy may be deduced from the consideration of these questions; inevitable, because our people are not a nation of fools, and do not intend to emigrate. Education, economical transportation, public and private morals, peace at home and abroad, equality before the law, and the rapid destruction of class distinctions, as the people, protected by a government of the people and for the people, become qualified socially for mutual and virtuous intercourse:—these are the foundation stones of our distinctive nationality. If this ideal has its enemies at home, it is because there are in all people conflicting principles of progress and retrogression, and because childhood has its peculiar perversities, born of undisciplined selfishness and lack of wisdom.

Viticulture, in professing to fulfill all the proper demands of the people as a progressive industry, conducive to public prosperity, happiness, and civilization, bases its claims for popular recognition, and State and National encouragement and protection, on the principles comprised in the foregoing general propositions. It has its enemies among political economists, who do not rightfully share our happy conditions of progress; and among reformers, whose notions of political power would lead them, if successful, to add to their present follies the religious intolerance of the past. It is, therefore, as necessary that we should discuss the principles of political economy and liberty, on which our ultimate success depends, as fully as we need to demonstrate the science and art that must govern the industry itself. This Commission addresses not only the viticulturist, but also the whole people and their Legislatures.

France and California are so nearly alike in extent of territory and agricultural resources, that it is to her that we may look for the most instructive lessons of experience. Dr. Jules Guyot, the celebrated scientist, who was commissioned by the French Government to make a study of the vineyards of that country with a view to improving their conditions, in the preface to his great work, which employed his undivided labor during four years, makes statements, which I translate as follows:

The vine occupied in France, in 1788, about 3,365,000 acres; in 1829, 4,975,000 acres; in 1849, 5,482,500 acres; in 1852, 5,750,000 acres; and, since that time, its area has extended until it

reaches the figure, to-day (December 10, 1867), of 6,250,000 acres; more than the half of the total area of the wine-producing vineyards of the world; a little more than five per cent of the entire territory of France, and the sixteenth part of its arable soil.

The gross product of the vineyards of France is more than three hundred millions of dollars; their culture employs and supports one million five hundred thousand families, which means six millions of inhabitants, and more than two millions of accessory operatives, transporters, and merchants, constituting together at least the fifth of our population, and representing a production and consumption of more than four hundred million dollars.

The gross product of the vine constitutes a quarter of the total agricultural production (animals not included), realized from one sixteenth part of the arable soil. This product is, then, mathematically, four times greater, according to surface covered, than all the other cultures combined.

Wherever the vine ripens its fruit well, it doubles the revenue of estates, large or small, in which its culture covers one fifth of the area, if it is directed with intelligence and receives care and fertilizing in proportion to what is bestowed on other cultures.

The culture of the vine is among the easiest, simplest, and most lucrative. It yields remunerative crops after the third year of plantation. The vine adapts itself to all geological formations; it prospers in lands the most arid, and the least favorable to cereals, root crops, and hay; it is, therefore, by this fact, the complement of all good agriculture, while it is the silent partner of the latter by reason of the money it produces—its strength and resource by reason of the hands and mouths that it supports.

Wine is the most precious and energetic of all alimentary drinks; its habitual use at the family table saves a third of the bread and meat; and, more than bread and meat, wine stimulates bodily strength, warms the heart, and develops the spirit of sociability; it gives activity, decision, courage, and contentment in labor and in all action. No drink, beer, cider, etc., can replace it in its happy and complete influence. Thus ought it to constitute soon the alimentary drink of all families, rich or poor, wherever civilization extends its blessings.

The normal consumption of wine as food, in order to give to human society its full force and activity of mind and body, should be at least equal to that of bread and its supplements; that would mean that France alone should consume two billion six hundred and forty million gallons annually, while yet she produces only from one billion three hundred million to one billion six hundred million gallons.

The great mind of Guyot enriched the agricultural wealth of France by instructing the producer how to make the most of his resources. He set an example of study that has since been followed by many intelligent students, who are perfecting and enlarging his theories of practical culture and vinification. This State is now drinking deep at the fountains of knowledge discovered in their books and illustrated in practical experience. The literature of France and Germany to-day is worth to us more than many mines of gold, and the students of other countries are adding their contributions to our industrial library.

In 1878 I investigated the condition and growth of viticulture in France and its influence upon the people. I found that during the decade preceding that year, the average annual production of wine in that country had increased to one billion five hundred million gallons, estimated according to the American, not the British, wine measure.

This production had increased in forty years from an average of seven hundred million gallons, by reason, probably, of diminished distillation and improved facilities for transportation, as well as by improved culture and increased acreage planted in the most fertile regions. Foreign commerce did not account for the increase, because during the same period exportations increased only from an average of thirty to an average of sixty million gallons annually, and now importations are in excess of exportations. The simple truth is, therefore, that practically the entire wine product of France is con-

sumed at home; nay, more, it has proved, as railways extended their lines, insufficient for home demand, as is shown by the efforts of dishonest trade to swell the quantity by falsifications and the strong attempts of the Government to prevent the same. As Guyot said, France needs more wine than her vineyards supply, and, therefore, any improved methods by which the vines may be made to produce more without exhaustion would prove a national blessing, as well as to add profits to viticulture.

In the course of my investigations into the influence of wine production and consumption upon the health, morals, and happiness of the people, I consulted the ablest medical authorities of both England and France, and the records of accidents, crimes, suicides, and insanity. I became acquainted with some of the distinguished men composing the Society for the Promotion of Temperance in France, and, through Doctor L. Lunier, Inspector General of the insane asylums and of the sanitary conditions of the prisons of that country, Secretary of the society, I was elected as one of its corresponding members. I am in possession of all of its printed reports and of the most important works published on this subject by many of the distinguished scientists and medical practitioners who are among its active members.

The statistical resources in France for the study of these questions are remarkably accurate and complete. All fermented and distilled beverages are so taxed that a perfect record of the consumption per capita of each kind in each department, commune, city, and town, can be traced. The tables prepared by Dr. Lunier show that the percentages of accidents, drunkenness, deaths, insanity, and suicides, attributable to alcoholic excesses, vary directly in proportion to the consumption of beet root, potato, and grain spirits, and inversely in proportion to the consumption of wine; that where wine is produced and consumed the most, the consumption of spirits decreases; that red wine districts show more favorably than the white; and that, even in the brandy-producing district of Cognac, the relations hold good as compared with white wine consumption, and the habits of the people do not lean to a large use of brandy. The evil results of alcoholic excesses are demonstrated as to the use of spirits, cider, beer, and wine, in the order named, in proportion to quantity consumed, being the worst in the case of the first, and least, if at all to be mentioned, in the case of the last. As illustrations, compare the following:

Department of the Gironde (including the maritime, commercial, and manufacturing City of Bordeaux) consumption per capita in *litres*, per annum: spirits, 1.36; wine, 180; cider, 0: beer, 3.73. Convictions for drunkenness in public, for each 10,000 inhabitants, in 1874–1876, 8.89; accidental deaths attributed to alcoholic excesses for each 100,000 inhabitants in 1872–1875, 0.74; insanity attributed to alcoholism, percentage of each 100 committed, in 1867–1869 and 1874–1876, 13.44; suicides from alcoholism, percentage of each 100, 12.60.

Department of Seine-Inférieure, under same heads as preceding: spirits, 10; wine, 21; cider, 79; beer, 9.60. Convicted of drunkenness, 76.62; accidental deaths, 1.84; insanity, 22.65; suicides, 9.99.

Department of Calvados, headings do.: spirits, 6.80; wine, 8.1; cider, 182.24; beer, 3.48. Drunks, 24.63; accidental deaths, 1.54; insanity, 29.37; suicides, 23.35.

Department of Nord, headings do.: spirits, 4.65; wine, 9; cider, 0.02; beer, 220. Drunks, 23.90; accidental deaths, 0.54; insanity, 8.78; suicides, 19.35.

Department of Charente (including the Cognac district), headings do.: spirits, 0.91; wine, 224.2; cider, 0; beer, 8.16. Drunks, 7.47; accidental deaths, 1.05; insanity, 12.17; suicides, 9.43.

These illustrate in brief, modified by occult causes, which, in large cities and manufacturing centers, such as immoral habits, excitements due to business and depressions due to misery, what may be designated as the relative evil results of alcoholism, as shown in comparison with the popular beverages.

That practically no evil results spring from the use of wine, unmixed with other drinks, is shown by the record of—

The Department of Aude, headings as before in the case of the Gironde: spirits, 0.90; wine, 260; cider, 0; beer, 8.74. Drunks, 2.80; accidental deaths, 0.08; insanity, 9.08; suicides, 0.

That a low average *per capita* consumption of wine, together with even as low an average as in Aude with respect to other drinks, does not effect a better showing, is demonstrated by the record of a very abstemious population in—

The department of Haute-Savoie (Alpine District), headings as before: spirits, 0.37; wine, 38.4; cider, 1.98; beer, 2.47. Drunks, 16.77; accidental deaths, 2.29; insanity, 13.22; suicides, 5.56.

It is apparent that in Haute-Savoie neither fermented nor distilled drinks are popular at the family table; that the spirits are probably German potato whiskies; that the absence of wine at the table sends those who drink to the cabarets or saloons; and that the evils of intemperance, small as they are, are worse than in Aude, where 260 *litres* (68.64 gallons) are consumed *per capita*, without any apparent evil results that may not, from an examination of these records, be attributed to the small proportions of other drinks consumed in the community. Aude, with its 68.64 gallons of wine consumed annually *per capita*, is practically a strictly temperate country, showing less danger from the bountiful use of wine than can be shown from smuggled alcohol in the most strictly governed prohibition communities of this country.

A careful study of statistics, together with personal observation of the habits of a great wine district, demonstrate that the free use of pure wine as a daily food leads to no excesses whatever that terminate in alcoholism or drunkenness and their attendant accidents.

As to the health of wine-drinking communities—where wine is a daily food—I could find no traces of special diseases attributable to its use. I could find no reference to such on the part of medical authorities. In such places liver complaints, kidney troubles, etc., were not more conspicuous but apparently less so than in other countries; and in respect to sound digestion and general good health, especially of women, the comparison was always in favor of the wine drinkers.

As to evidences of popular happiness and content, we have only to observe that gay songs, bright faces, and alacrity so characterize the people of wine countries, and their contentment is so well proved by their reluctance to emigrate, that we have only to witness the tired sullenness and silence that brood over the dinner hour of the American working people, who drench their stomachs at morning with a flood of bad coffee, soak their hot food at noon with cold water, fill a tired stomach in a tired body at night, without pleasure and convivial expression to revive tired spirits, and relieve their minds either by evening dullness, or even bad temper, or by spirituous excitement in the drinking saloon—we have only to witness these things to cause us to wish godspeed to viticulture.

As to evidences of the influence of viticulture as an industry, giving employment to one fifth of the population of a great nation, on the wealth and general prosperity of the people, we have only to point to France in our times, as we have seen her emerging from a great war, paying off her great debt, proceeding peacefully with her industries, engaging in great enterprises, exploring and colonizing Africa and Asia, building interoceanic canals, engaging in foreign wars, and, even under a republican form of government, attracting to her capital annually thousands of our most intelligent travelers, students, and pleasure seekers.

As to public and private morals, those who would judge France by the floating population of strangers and pleasure seekers, which is catered to by the professionally dissolute classes, should, if in this country, institute the comparison by first studying life at Saratoga, Long Branch, and the "Thoroughbreds" of New York. If they would judge her by the home life of her producing classes, they will confess that, as travelers, they have not seen the inside of French homes, which are protected by customs, peculiar to her people, from the knowledge of strangers.

As to the administration of justice and the honorable discharge of public trusts, France shows no demoralization resulting from the consumption of fifteen hundred million gallons of wine annually and the absorption of one fifth of her population in viticultural industries.

As to the advancement of arts and sciences, we see no decadence from the use of wine; the greatest scientists and artists are wine drinkers, and to Pasteur, who occupies the public mind more than any other to-day, viticulture owes its greatest impulse in perfecting methods of fermentation.

As to the preservation of the idea of personal liberty, equality, and fraternity, wine proves no degrading influence. Surrounded by greater obstacles than have been encountered by any great nation in the progress of popular development, France, in our times, coincident with the vast increase in the productions of viticulture, has achieved republican freedom and stands to-day the peer of European nations.

There are those who confound the results of race characteristics, social oppressions, and ages of ignorance among working people, with the results of wine production. Let those, who desire to make fair comparisons, institute them between those eastern countries within the zone of viticulture, where the industry is fostered, and where it

has been interdicted. Compare Greece, even in her decline, and Italy with Turkey, Egypt, Arabia, and Persia. Compare prohibition Palestine with ancient wine drinking Judea. Compare peasant life of France and Germany with that of Russia. Viticulture will not shrink from learning any useful lesson that may be drawn from the experience of the world as taught by science and honest investigation.

Happy California! She, who may rival France in viticulture! Happy United States of America—Columbia! She, who counts the star of California on her national flag! Happy San Francisco! She, who will become the Paris of America! Happy may our enemies be, those who predict debauchery, crime, poverty, and public decadence, as the outgrowth of viticulture, if they may see forty millions of people supported on the soil of California, as happily situated as those of wine-blessed France! Happy viticulturists of California! When public sentiment boasts of your achievements, and crafty politicians do not disguise their friendship! Unhappy Iowa! For she has lost personal liberty, and may look to her present rulers for their next attempt, which will be to engraft ecclesiastical intolerance in the constitution of her government!

THE GROWTH AND PRESENT CONDITION OF VITICULTURE IN CALIFORNIA.

Viticulture was introduced into California by the Franciscan Fathers, who established the first civilization on this coast. Their first Mission was founded at San Diego in the year 1769. As soon as they had securely commenced their work of proselyting the native Indian tribes, bringing them to engage in industrial pursuits in the vicinity of the Missions, they planted the vine, olive, fig, pomegranate, date, palm, and pear. Relics of these early plantations are still in existence. The orange and lemon appear also to have been cultivated; but at what period they were introduced I have not learned. Cereals and leguminous plants, cattle and horses, were also objects of their industry.

A variety of the *vitis vinifera*, bearing large loose clusters of black grapes, was propagated at all the Missions in favorable situations. This variety is now known as the *Mission* grape. If it came from Spain or Mexico directly, or was produced from seed, is not now known. Certainly it bears no resemblance to any variety that has since been imported from Europe, or that has been described in any work on ampelography that we can find. That the Fathers, considering their great resources at that time, would have neglected, if they made their selections in Spain, such noble vines as the *Pedro Ximenes*, *Grenache*, *Carignan*, and *Moscatel Gordo Blanco*, is not to be supposed. That it may have been considered by them impractical to preserve vine cuttings, or roots, in those days of long voyages, is not improbable. That they attempted to propagate the vine, olive, fig, pear, and other fruits from the seed, is not only reasonable to think, but that they did so is made apparent by the distinctive characteristics of the relics they have left to us in their orchards and vineyards. The identical and rustic natures of the Mission vines, olives,

and figs makes it also appear that the seedlings were first produced in Mexico, where the most vigorous varieties were undoubtedly selected for the California Missions. If the *Mission* grape was a popular variety in Spain a century ago, it has certainly disappeared as such before the hand of the skillful cultivator, as it is now disappearing in many sections of this State.

In some of the old vineyards, planted from stocks obtained from the early Missions, there is yet to be found a white variety having a delicate Muscat flavor. This may have been a seedling of the *Muscat blanc* of Frontignan.

Soon after the cession of California to the United States, some of the new settlers, seeing the fertility of the Mission vine, and being acquainted more or less with viticulture, conceived the idea of abandoning gold hunting and engaging in wine making. Among the most prominent of these pioneers were Colonel Agoston Haraszthy and Charles Kohler. The latter may be styled the pioneer and founder of the present wine trade of California. Mr. Kohler became, not only a wine maker and merchant, but also a vine-grower. He is still a leader of the industry, operating large vineyards in Los Angeles, Sonoma, and Fresno Counties, and conducting mercantile business in wines and brandies in San Francisco and New York.

Colonel Agoston Haraszthy, the honored father of our worthy President, brought with him a knowledge of viticulture acquired in Hungary, his native land. More than thirty years ago he commenced to propagate vines in San Diego; thence, he transferred his nurseries to San Mateo, and afterwards to Sonoma County. He collected, by direct importation and from others engaged like him, a large number of varieties, among them the *Zinfandel*, which he knew in Hungary. This vine he imported and propagated with so much zeal, and urged its adoption with so much success, that it now dominates among the red wine varieties in our vineyards. It was the first vine to give extended popularity to our clarets. In 1859, he was appointed by the State as the leading member of a Commission to study the vineyards of Europe and to make collections of desirable vines. He traveled throughout France, Germany, Spain, and Italy, made collections of vines, and acquired information, all of which was freely devoted to the advancement of the industry on this coast. The catalogue of his nursery comprised the greater portion of the noble vines of the world, and as a matter of history, was reprinted in the first annual reports of this Commission. It would not be true to history if we did not record the fact that the action of the State was at that time merely in conferring an honorary distinction, without expense to the people. Colonel Haraszthy traveled and made his collections at his own private cost. If the State at that time had realized the importance of the work undertaken, and provided for popular instruction in viticulture, especially as to the relative merits and uses of the different varieties introduced, we should have been far more advanced in the quality of our products than we are to-day.

Colonel Haraszthy founded the Buena Vista Vineyard at Sonoma, and made many experiments in the attempt to reproduce there types of foreign wines popular in commerce. He was one of the first to

demonstrate the practicability and general superiority of wine vineyards cultivated without irrigation, and taught the doctrine that careful selection of varieties would control the quality of our products. From his collection, among many others, were propagated the now popular varieties of table grapes, the Flame Tokay, and Emperor, and the *Muscatel*, which passes sometimes under the name of *Moscatel Gordo Blanco*, *Muscat of Alexandria*, and *White Muscat*, well known to the raisin makers and the shippers of table grapes. Mr. R. B. Blowers obtained his *Muscatel* and *Emperor* stocks from Colonel Haraszthy, giving the name *Emperor* himself to a variety the true name of which had been lost, and to this time not recovered. The necessities of business led Colonel Haraszthy away from this State before he had completed his labors, and he left this life without realizing the great and honorable reputation which has become the legacy of his children, two of whom are following in the path that he so wisely pointed out.

Contemporary with Colonel Haraszthy were a number of enthusiastic citizens from France and Germany, who imported favorite stocks from their native lands, and laid the foundations of vineyards that are now successful.

The Germans adhered, however, generally more closely and persistently to their enterprises, and propagated with more systematic effort the noble varieties of the Rhine, leading among which has been the *Riesling* (called Johannisberg here), and the *Sylvaner* (or *Franken Riesling*), *Orleans*, *Gutedel*, *Traminer*, and a variety called *Burger*, which is not the well known *Burger*, or *Weiss Elbling* of Germany. It is a question whether the so called *Golden Chasselas* of St. Helena came in their collections, or whether it was accidentally misnamed after coming from Colonel Haraszthy's collection of Spanish varieties. The systematic plantations of these German collections won the first victory for quality in our white wines, which became popular in the markets before any of our clarets gained public recognition.

The French varieties, as well as the large collections made by Colonel Haraszthy from all sources, fell generally into the hands of planters who either abandoned their enterprises before perfecting them, or who were not acquainted with their relative merits and proper methods of culture. A few, notable among whom are Mr. Charles Lefranc and Mr. P. Pellier, preserved and propagated collections, now extant, which have been of recent service. The noble varieties of wine grapes of France and Germany, with few exceptions, require long pruning, special care, and adaptation to soil and climate, in order to produce profitable results. Until comparatively recently all varieties were subjected to the same treatment, and were tested without reference to adaptation to soil and climate. The practice of pruning on arms, after the goblet style, with short spurs, which had been learned from the Mexicans in cultivating the Mission grape, was applied to all alike by nearly every vine-grower. Each one experimented first with promiscuous varieties and selected for continued propagation those that yielded by their methods the largest crops. At one time even the *Riesling* was in danger of being sacrificed as an unprofitable vine; indeed, so few understood it that until very recent

plantations it entered into very few vineyards for more than a small proportion. The *Riesling* wines of our commerce have therefore been largely blended with coarser products, and the true capacity of our State to furnish the Rhenish types of good quality is not yet well known to the general trade outside the State. In this respect, as in others, the surprises for the eastern markets that our new vineyards promise within the next three years can scarcely be appreciated at present. By the unfortunate system of selection adopted the choicest of French, Spanish, and Portuguese varieties were sacrificed to the test of quantity by short pruning. The result has been that the original collections of noble stocks were mostly lost to identification and forgotten by name until the organization of this Commission, when a new impulse to systematic viticulture was given. The *Trousseau* was neglected for the *Charbono*, the *Sauvignon blanc* and *jaune* for the *Colombar* and *Folle Blanche*, and the Bordeaux claret and Burgundy stocks were practically abandoned, the small proportions existing being drowned beyond recognition of their quality in thousands of gallons of coarser grades.

To explain the peculiarities of our wines to those who have looked for reproductions of celebrated European wines in our general stocks as handled by the trade, and who have asserted our inability to produce them, it is necessary to say that among the bearing vineyards of the State, with the exception of the Rhenish stocks, the Hungarian *Zinfandels*, and two plantations of the Roussillon varieties (*Mataro*, *Carignan*, and *Grenache*), there has not been found a single bearing vineyard planted systematically with the varieties necessary to reproduce the types of Bordeaux clarets, Burgundies, Sauternes, Hermitage, Portuguese port, Spanish Sherry, Madeira, or Cognac. The few Roussillons and an acceptable type of Sauterne from the *Colombar* blended with other varieties, have been consumed in local markets. A very limited proportion of *Chauché noir*, *Trousseau*, *Charbono*, and of such uncertainly named vines as *Crabb's Black Burgundy*, with scattering small lots of *Mataro*, have found their way to market in blends of selected stocks. Sweet ports have been made specially from the *Mission* grape, with recently in some places an addition of *Zinfandel* and the so called *Black Malvasia*. Sherries have been produced after the French rather than the Spanish rules, and from any wines that presented heavy types and an approximation to the popular notion of sherry flavors. Sweet wines of original types have been very successfully playing the roles of Malaga, Madeira, Angelica, etc. Brandy has been of three leading classes, viz.: distillations direct from the Mission grape without excluding the wine fermented on the skins, and without blending varieties to produce aroma and bouquet; brandy from the pomace, or refuse of the wine press, and from wine that has been rejected on account of defective fermentation; and new types of original character unknown to commerce, such as General Naglee's products from the *Charbono*, with small admixture of *Trousseau*. Few exceptions can be made to this statement as to brandies, such as the recent distillations of Mr. George West, from his *White Prolific* (true name unknown), which resemble Cognac in character.

Exceptionally good lots of wines and brandies have been made at

different times from small lots of grapes of fine quality, such as Mr. Lefranc's *Malbeck* of a few vintages, Mr. George West's *Frontignan*, Mr. Bugbey's (very small lot) *Verdelho*, Mr. J. H. Drummond's (experimental work) *Cabernet-Sauvignon*, *Petite Syrah*, and *Semillon*, Mr. William Scheffler's *Burgundy*, Mr. J. B. J. Portal's *Ploussard*, and Mr. L. J. Rose's and Mr. George West's *Trousseau* port of true type. The most numerous samples of experimental wines, not offered for sale, but which have convinced those who have seen them of the practicability of reproducing the noble types of Europe, have recently been shown by Mr. H. W. Crabb, Mr. J. H. Drummond, and Mr. Horatio Livermore, Manager of the Natoma Vineyards.

As the general market knows our wines and brandies, with the exception of German White Rhenish types, *Zinfandel*, and a few blends, slightly improved by a little *Mataro*, *Charbono*, *Trousseau*, *Chauché noir*, and *Crabb's Black Burgundy*, our stocks have not been produced from systematically selected varieties, planted with reference to the reproduction of popular types known to the world.

In champagnes, Mr. Arpad Haraszthy has made a signal success in producing a type, after the true manner of fermentation as practiced in the celebrated champagne district of France, which differs from French champagne in character not much more than Mumm's brands differ from Roederer's, but which owes its peculiar flavors and bouquet to the white juices of the *Zinfandel* and *Burger*, while those of France owe theirs to the *pinot* family, and other less noble stocks. The Burgundy and champagne *pinot* varieties have not been cultivated in California in vineyards, now bearing, in numbers to affect products appreciably. A sample lot of the champagne stocks, planted by Mr. Benson, will be tested this year.

The foregoing explanation of the sources of our present market wines should prepare our distant friends for new experiences, when new qualities are offered from the vineyards that have been planted during the last four years. These new vineyards necessarily show a predominance of those varieties which were attainable in sufficient quantities from the vineyards already in bearing. The general average of quality has, however, been very materially raised by discarding the least valuable among the prolific varieties, such as the *Mission* and *Black Malvasia*, and by increasing the value of *Zinfandel*, *Charbono*, *Burger*, *Chasselas*, etc., which generally have given fair and sometimes superior products, by adding certain proportions, as the stock of cuttings has permitted, of Burgundies, *Trousseau*, *Chauché noir*, *Malbeck*, *Mataro*, *Carignan*, *Grenache*, *Ploussard* (of red wine varieties), and *Colombar*, *Folle Blanche*, *West's White Prolific*, *Riesling* (Moselle, Johannisberg, Franken, and Orleans), *Frontignan*, and *Verdelho*. Coloring wines from the *Lenoir*, *Gamay Teinturier*, and the Bouschet hybrids will also soon make an appearance.

With a largely increased area in the best varieties now known to the market, improved by the absence of blends with *Mission* and other inferior stocks, which will soon, except for special purposes and some sweet wines, be sent to the distilleries, and by the addition of certain proportions of the nobler stocks and of those having special

value for their tannin and coloring contents, the wine markets within the next three years will witness a veritable revolution of general average quality. The improvement will be specially noticeable in dry reds (of Bordeaux and Burgundy commercial types), sweet reds of true Oporto character (the *Trousseau* or *Bastardo* having been specially and extensively propagated for this purpose), Rhenish Whites, fair substitutes for light Sauternes (from *Colombar* and *Folle-Blanche* with appropriate blends), and good approximations to high classed young Cognacs, if not their equals Wine dealers will understand that I am using words critically, and that such brands as I refer to as the certain results of the next few vintages will be far superior to the average imported grades of similar pretensions. My intention always is to furnish to commerce a correct guide, suited to the critical standpoint of trade, so that it may know what to expect and how to prepare for what is coming. We shall appeal to the wine dealers throughout the United States to assist and encourage our producers in their present endeavors to raise the standard of quality in their products. If this appeal should fail, either this Commission will have preached sound doctrines in vain, or our producers must vindicate our wisdom by organizing and controlling the wine trade to suit their own proper ambitions.

In the near future the wine dealers may prepare also to provide a market for clarets of high Médoc character, true high class Burgundy, true Sauternes, and Cognac types that will rival the best produced and surpass any in general commerce. High-classed sherry is a thing yet for experiment, the necessary preliminary test samples not yet having been produced. Fine sweet wines and cordials can be produced whenever the trade will indicate the demand. In this respect there is no doubt of complete success; and with respect to the Oporto type the vines are now beginning to bear that will distance all possible competition from abroad It remains only to be seen whether the consumers prefer corn spirits, flavored and sweetened with glucose syrups So far as good dry wines and fine brandies are concerned, we know that nothing stands in the way of our markets except the cupidity of many retailers, whose dishonesty must either be restrained by their own good sense or by the hard hand of the law.

Many of our most progressive planters, particularly some of those who possess sufficient capital to hold wines until maturity, are making rapid progress towards the reproduction of the finest possible types by grafting old vines with imported cuttings. These will commence to make their showing within three years, but how long before they pass the limits of local demands is not so clearly stated They will find many more to follow their example, if practical results follow their first attempts, and the transformation of lower grade vines by means of grafting will work astonishing wonders in a few years. The question with them will be, will the market pay for high quality that has been attained at a sacrifice in quantity?

Dealers who have been accustomed to believe that fine wines require many years of maturing, will learn that this process, for reasons not necessary in this connection to discuss, is much hastened by natural causes in California, as shown by present experience.

We have no means for procuring exact estimates of the areas of vines planted throughout the State. The Assessors fail in every case to obtain even approximate returns. Our own estimates are based on better opportunities to judge the facts and a disposition to learn the truth. Prior to 1880, the extent was variously estimated at from fifty to sixty thousand acres; the former figure is probably nearest to the truth. Since that time about one hundred thousand acres have been planted, and the disposition to increase the work still further continues. As long as many soils suitable for vines fail to produce profitable crops of cereals, and real estate operations make them too high priced for grazing, and as long as a tide of immigration seeks our climate for congenial occupation, this industry will continue to grow, checked only by temporary fears of over production.

On December 18, 1883, I made, for the use of the press, an estimate of vines planted and probable vintages for coming seasons up to that of 1888, as follows:

Area of vines planted prior to 1881 and now bearing well, about 60,000 acres; planted in 1881, about 10,000 acres; in 1882, about 35,000 acres; in 1883, about 35,000 acres. Estimated to be planted in 1884, if weather is propitious, 30,000 acres. There will be in 1885, 70,000 acres five years old and upwards; in 1886, 105,000 acres five years old and upwards; 1887, 140,000 acres five years old and upwards; in 1888, 170,000 acres five years old and upwards. The percentage of table, shipping, and raisin grapes, about twenty per cent; balance for wine and brandy.

Wine crop for 1881 was about 12,000,000 gallons; for 1882, about 9,000,000 gallons; for 1883, about 8,000,000 gallons. Estimates for 1884 (normal yield), 14,000,000 gallons; for 1885 (normal yield), 15,000,000 gallons; for 1886 (normal yield), 20,000,000 gallons; for 1887 (normal yield), 25,000,000 gallons; for 1888 (normal yield), 33,000,000 gallons.

These estimates include brandy—each gallon of brandy represents about four gallons wine distilled; so that if one third be distilled in 1887, we shall have about 16,000,000 gallons wine, and about 2,000,000 gallons brandy. In 1888 we shall have about 22,000,000 gallons wine, and nearly 3,000,000 gallons brandy.

I am inclined now to believe that the estimate of vines planted prior to 1881 was too large. I adopted the figure as it has generally been fixed by wine-growers; 50,000 acres would probably be near the truth.

The last planting season was unfavorable on account of the dryness in the early part, and the excessive rains later. Many prospective vineyards were delayed or abandoned. I cannot form a very clear conception of the acres added, but the figure might reasonably be fixed at 20,000. These modifications, if correct, would reduce the estimated acreage of bearing vines for 1885, 1886, and 1887, by 10,000, and that of 1888 by 20,000. So much margin was, however, allowed for partial failures of crops that the estimates of wine products may not have been too great. That of this season is now estimated in advance at 15,000,000 gallons from appearances in the field.

The prices paid for grapes at wineries, where distillation and sweet wines are not the chief products, but where dry wine is generally attempted, varies from twenty-five to thirty-five dollars per ton of variously proportioned varieties, and from thirty to thirty-five dollars for certain select qualities. Forty dollars would probably be paid for sufficient quantities of such varieties as *Cabernet-Sauvignon*, and certain commercially valued coloring stocks. In the same districts the

new wines of recent vintages have correspondingly varied from twenty-five to thirty cents per gallon, naked, and delivered at the railway stations in cooperage furnished by the purchaser. Special lots from comparatively scarce varieties of French wine grapes of not high quality, but valued for blending with light Zinfandels of poor color and character, have sold as high as thirty-six cents. Probably, if whole cellars of unblended Riesling could have been obtained, the price for them would have ruled at from thirty-five to forty cents under like circumstances. Inferior cellars unrelieved by certain fair proportions of the best average qualities have generally sold at from twenty to twenty-four cents.

There is no way to determine what the values of the wines would have been if aged one year at the vineyards. Those producers who have kept such wines generally do also a mercantile business, and sell direct to the consumers, retailers, and jobbers. In such cases mercantile profits are generally added, and the wines may range, according to quality and quantity sold, at from thirty to forty-five cents per gallon, small lots of single barrels to consumers even at prices from fifty to seventy-five cents. The cases where one dollar per gallon is charged are not numerous, and do not represent any considerable trade, unless it may be in the case of high classed Rieslings.

Considering the prices as for average bulk lots, grapes, or new dry wines (naked), in well established districts, and for vineyards of the best average quality, yielding about four tons of fruit to the acre, we may arrive at an estimate of income as follows:

Grapes sold to the wineries, $100 to $120 per acre; cost of good culture, picking, and delivering crops, $30; net profit, $70 to $90 per acre.

Wine (estimated at one hundred and thirty-five gallons per ton and eight gallons of pomace brandy), sold new and naked, $135 to $162 per acre; add thirty-two gallons of brandy at seventy-five cents (generally more has been realized, but the tendency is downwards for pomace brandy), or $24 per acre. Some of the larger establishments probably make the brandy pay all or nearly all the cost of making the wine.

Most of the wine makers have been struggling without much capital and paying large rates of interest to establish themselves, and have frequently suffered losses from imperfect fermentation, fires, etc.; so the rate of profit has not been more than they deserved.

The statements made should cause planters to consider the importance of combining wine making with grape growing. This will be the more desirable in cases of small vineyards, where the crop does not exceed three tons to the acre, and where the finest varieties are grown, for to get the full benefit of fine varieties they should be carefully fermented by the grower, who understands them, and kept apart from inferior stocks which would serve only to drown them out of sight of trade. Producers need not fear that the choicest varieties, neglected in the past, especially in the case of the best claret grapes well adapted to soil and climate, will ever bring less prices than the better average grades now do, say, thirty cents a gallon for wine; on

the contrary, with increased production, the tendency is towards lower prices for inferior wines, higher prices for the most select and uncertain varieties, though general stability for the good averages, which now constitute our best general trade stocks.

The probabilities and certainties of success in planting and wine making may be deduced in a measure from these statements; the direction of probable risk is the same that leads to a low reputation for our products.

The production of high classed wines, aged many years, and sold in glass, will certainly never be more generally popular, or safe as a general occupation, than in other countries. France, when producing fifteen hundred million gallons of wine, never probably surpassed ten millions of so called "fine" wines. The department in which Bordeaux is situated, and the center of trade for the most celebrated wines of foreign commerce, produced only three millions of gallons of classed "fine" wines, out of sixty millions total product.

"Fine" wines never become articles of daily food to the substitution of lighter ordinary clarets, sauternes, hocks, etc., on the tables of any very intelligent and experienced people of the most wealthy classes, and much less so with those of less resources.

We need good sound commercial wines, ranking in competition with French products, as *bon ordinaire* and *supérieure*. We need something better than the simply *ordinaire* wine to win our way to new markets, and to compete against beer. To accomplish these results, we need to associate in our vineyards, together with about two thirds of such good fertile stocks as *Mataro*, *Zinfandel*, *Crabb's Black Burgundy*, and *Carignan* (reds), *Colombar*, *Burger*, *Golden Chasselas*, and *Folle Blanche* (whites), about one third proportion of some of the nobler or variously valued less fertile varieties, such as *Malbeck*, *Cabernet-Sauvignon*, *Burgundy Pinots*, and *Trousseau* (reds), *Rieslings*, *Sauvignon-blanc*, *Semillon*, *Raisinotte* (*Muscadelle de Bordelais*), *Traminer*, *Pinot gris*, and *Chardenai*. To supplement these for blending purposes, the trade will demand stocks of tanniferous, coloring, and certain flavoring wines, such as *Grosser-Blauer*, *Tannat*, *Lenoir*, *Petit-Bouschet*, *Alicante-Bouschet*, *Gamay Teinturier*, *Frontignan*, etc.

Whether wine making is to be practiced or not, all plantings of wine grapes should be made with reference to wine-making, in order to preserve true proportions in the crops of the State.

Those few who aim at the production of "fine" wines must be the most careful in selection of climate, soil, and exposure, and noble varieties, and must look well in the face all the necessary appliances, such as cellars to mature and store several vintages, and they must be content to wait longer for their profits. That there will be a good market for a certain large production of "fine" wine, there is no doubt, but none should undertake this branch of production who do not fully comprehend all its necessities.

Those who imagine that they are acquainted with truly high classed wines, because they have consumed products labeled "Chateau La Rose," etc., know as little of the true labels as they do of the wines. Governor Stoneman is as likely to sign his name to a business letter as "His Excellency Governor Stoneman," as the proprietor of the

Chateau *Gruau La Rose* or *Leoville-Barton* is to use the word Chateau on his wine bottles. Wines selling under such labels as are common to the hotel wine lists, are generally not equal in quality to a nameless *bon ordinaire* of Bordeaux, but actually pass the custom houses under the contemptuous commercial title of *vin de cargaison*—cargo wine.

I have referred to the prices of our best average commercial lots of dry wines. There are sections of the State which, either for want of better fermenting facilities, or for want of better proportions of good varieties of vines, suited to the climate and soil, which do not enjoy the profits named. In such districts prices generally vary from eighteen to twenty dollars per ton for grapes at the wineries or distilleries, the cost of transportation long distances to the purchasers often reducing the profits materially. The growers in such places should secure better stocks by grafting and make their own wines.

The mercantile prices for wines in large stocks are very reasonable. After paying for cooperage, transportation from the country, maturing, blending, commissions, or traveling agencies, they deliver good fair dry wines, free on board steamer or rail, at from forty to forty-five cents per gallon. Certain selected lots may rule higher; but it may be said that the bulk of our average good stocks may be had, delivered to the trade in New York, at from fifty-two to sixty cents per gallon. Before these can reach the consumer or retailer, who is not sufficiently well informed to order direct from leading houses by the barrel, the expenses and profits of the New York agencies, jobbers, and commission agents must be added. A well managed trade, however, ought to place good California clarets in the hands of retailers through New York agencies at a price of not exceeding seventy-five cents per gallon, cost of transportation to country places added. An addition of ten cents per gallon ought to cover all present differences of quality above present ordinary averages, and an addition of fifteen more ought to reasonably cover the cost of procuring our best young wines as new plantings develop them. In other words, without lowering present profits to the wine-growers, the trade ought to be able to place wine, much better than the ordinary grades of imported French wines, in the hands of retailers in New York at not exceeding one dollar per gallon, as soon as our producers have it for sale, which will be within the next three years, and good, sound, ordinary wine at not exceeding seventy-five cents—which latter figure represents seven and one half cents per contents of the regulation pint bottle, which can be sold at fair profit for ten or twelve cents by restaurants, or substituted in slightly reduced volume, without extra charge, by hotels, for tea or coffee.

I have not referred to the prices of sweet wines and brandies; these being more easily transportable, are well understood by the trade. The cost of fortifying the former with brandy, or spirits, which all sweet wines contain to preserve them from fermentation, should be decreased by Congress, inasmuch as the wines of this class that we compete against are fortified with free spirits. In other words, the port and sherry wine shipper at Cette, France, can, or could recently, buy American corn spirits in bond at Marseilles at about twenty-five

cents per gallon, while the same goods must cost for our wine makers the additional price of ninety cents per gallon internal revenue tax, and if using brandy, he uses still more costly material. Our dry wines need no distilled spirits, hence the question does not pertain to them at present, although in sending some grades of rich wines to hot climates it may become necessary, as is practiced in Europe, to add about one per cent of spirits, which should be permitted free of tax.

Choice brandies from two to three years in bond, have been sold in trade at about two dollars and a half per gallon, tax paid; small lots, to retailers and consumers, at from three to four dollars. Ordinary brandies, in large lots, at from one dollar to one dollar and a quarter, in bond, to the trade; certain lots at less figures.

The finest average brandies that we are capable of producing can be profitably sold new, at the distillery, in bond, at one dollar per gallon, which would represent about thirty-five dollars gross per ton of grapes, or about thirty dollars net. Vineyards for such purposes can be planted where the average crop of *Burger, Folle Blanche, Colombar*, and *West's White Prolific* would be about six tons to the acre. It is evident, therefor, that the brandy trade should be able to work off any surplus stocks of wine grapes with profit at even lower figures, if necessary.

At present the demand for brandy appears to be slack. This fault can be speedily remedied by the production of much finer goods to compete against whisky. Pomace brandies and those distilled from very ripe grapes of poor quality, especially where the juice is fermented on the skins, will not successfully contend against corn spirits, which are cleaner to the taste, if they are not better to the blood. A fine cognac type, which we are capable of producing in great quantity, should successfully enter the market. Plantations, with the cognac type in view, have been made, and before long the trade can test this question.

A brandy of original type has been placed on the market by one producer, but his system of paying tax and keeping in his own cellars for maturity, makes the cost too high for general trade, and his example will find few imitators.

Grapes for shipping east by rail have sold at prices ranging from forty to one hundred and fifty dollars per ton, the general average being about fifty dollars, excepting this year, which records at this time about seventy dollars. Recently the eastern demands have increased for favorite varieties faster than the new vineyards can be brought to bearing. Large crops will no doubt reduce the prices to normal conditions. Unless shipping grapes bring at least forty dollars per ton, growers will prefer to graft over to wine varieties selling at considerably less, on account of the extra expenses of picking and assorting the former and the losses sustained from the small value of the refuse bunches, which will not be profitable to the shipper, but which must go to the vinegar factory or distillery.

While improved facilities for trade and mercantile competition have steadily reduced the prices of our wines to the retailer, the constantly increasing demand and more critical taste of consumers have in like degree advanced the prices paid for grapes and new wines in

the country. The facilities granted by the law for bonding spirits have rendered it practicable to distill at reasonable profits, and so to relieve the wine markets in a measure of inferior grades. The brandy law is, however, still very defective. Wider facilities for transporting in bond, and regulations for the change of size of packages, and refilling loss by evaporation under distillers' stamps, are required. The producer has also the right to demand of the Government the right to hold his goods until they are properly matured before being compelled to sell them.

The enforcement of a heavy tax on production before the distiller has matured his goods, and before he can place them on the market, demoralizes the industry and causes vexatious annoyances, sometimes actual confiscation. Brandy is no sooner in bond than the owner is looking for a purchaser, fearing as he does the danger of being caught at the end of the bonded term with unsold property. The present law would only be just in case the Government should assume the cost of manufacture when it forces spirits upon the market. The injustice of enforcing a confiscation tax on property which the owner does not offer for sale or consumption is so apparent that no unprejudiced citizen can sustain the policy. The greater part of the evils of intemperance is attributable to the action of the Government. In England, recently, a reform has been agitated by friends of temperance on the principle of prohibiting the sale for consumption of any spirits under three years of age. In this country producers are compelled by the Government to sell within that time or to submit to a forced loan of an amount greater than the cost of production

The policy of enforcing high licenses and oppressing retailers by bell punch taxes and the like drains upon their revenue, which at the same time permit unrestricted competition, operates to reduce the quality of goods sold to the consumer. There would be great wisdom in municipal regulations, based on careful calculations of the custom necessary to sustain retailers, by which the number of saloons should be limited according to the ascertained consumption at such places in each community, so that excessive competition and taxes should not force the sale of the cheapest and most inferior goods. Supplementary to such regulations the people have an undoubted right to demand strict supervision to prevent imposition. In fact, if spirits should be treated by the law as products which should not be sold in places of convivial entertainment, where the necessary caution in selecting and consuming is often impracticable by reason of the social conditions surrounding the act, but which should be limited to places where no consumption is permitted on the premises, or on any other where the trade in spirits is interested in the profits, the wine and brandy producers would have no just cause for complaint. If the sale of spirits is properly regulated the producers would have just cause to complain against discriminations and unjust taxation and oppression, both in their own behalf and for the protection of consumers.

Present efforts of those who aim to diminish the occasional evils of intemperance are conducted on the principle that the many who are innocent shall wear straight jackets in order that the foolish few may

be restrained. The innate disposition for the preservation of personal liberty compels the many to assume in part the attitude of defending intemperance. Wise regulations for the prevention of alcoholic abuses, without interfering with the personal liberty of those who require no legal restraints, would meet with the cordial support of the great majority of viticulturists. These latter would not be so foolish as to anticipate any millennium, nor to imagine that criminal indulgences would be much less marked in the general average of the people than they are now in the ranks of total abstainers. No real progress can be made in reforming intemperate habits without curing intemperance itself, which is a habit of undisciplined mind, rather than any particular method of exposing the same. The so called intemperance, by which word is usually meant abuse of alcoholic drinks, is only one phase of intemperate life; restraint of one means of self-indulgence does not cure the complaint. The abuse of alcoholic drinks indeed often is induced by disordered physical and nervous conditions of health, due either to overwork, periods of abstinence and poor nutrition, continued and irregular fasts of mind in respect to social intercourse, sedentary occupations in badly ventilated apartments, with long fasts between morning and evening meals, and their attendant consequences—torpidity of natural appetite, low spirits, headaches and biliousness, enforced idleness for active minds, and unrestrained criminal desires. The evils in these cases lie deeper than in the occasional or habitual abuse of alcoholic stimulants; and the habit of drinking sound dry wines at meals would cure most of these, or alleviate the misfortunes that arise from unequal burdens of life. In many cases an uncontrollable tendency to alcoholic excesses might be cured by the administration of a dose of calomel and quinine, followed by the free use of claret and water at meals, and repetition of the anti-bilious treatment as the tendency to intemperance recurs.

It is to the physicians and scientific students of life, who do not expect any millennium, that society should look for the reform of alcoholic abuses; and to the wholesome restraints and discipline of youth in homes that permanent progress in social growth and healthfulness must be traced.

As to criminal acts committed during alcoholic excesses, we may assume that intemperance is the result of criminal conditions of the mind, which sets no restraints upon ambition and desire. As to insanity, who can tell whether it is not the insane disposition that leads to alcoholism?

A society for the promotion of temperance from truly scientific standpoints, and free from the intemperate desire to use political power contrary to the best interests of the development of individual character, should be organized in this country. No better model for study could be found than the society which now flourishes in France, while much might be added to its scope in the way of disseminating public information and reviving parental control and discipline.

Our industry is forced to a consideration of these questions, not only in self-defense against erratic and impractical reformers, but also because our success largely depends upon the general good and prosperity of the people.

THE QUESTION OF OVER-PRODUCTION.

As to the prospect of over-production, in order to arrive at any satisfactory conclusion, we must first attempt to understand our markets, both for the present and the future, and also make some estimate of the friendly disposition of the mercantile classes through whom we need to reach consumers.

In respect to wine consumption, having determined the question as to the practicability of producing all that may be demanded of good quality at reasonable prices to the consumer, after adding the ordinary shipping profit of the general dealers, transportation, commissions, and the fair profits of the retailers, we have first to consider the capacity of our home markets within the United States for disposing of our goods. Out of our present population of fifty millions of people, certainly not less than thirty millions are without prejudice against the temperate use of wine. These constitute, besides those who would habitually use wine at the table if they could obtain it of satisfactory quality at reasonable prices, the greater number of those who occasionally or habitually use beer or spirits, or who have acquired the taste without the habit of wine consumption. Of this number there must be at least ten millions who well understand the use of wine, but whose habits have been changed or perverted by the impracticability of supplying their wants economically and with assurance as to uniform quality.

Assuming that we produce the necessary grades for commerce, and that trade is regulated so as to protect the consumer against imposition, ten millions of people, consuming annually thirty gallons of wine *per capita*, which is less than the average in France including all districts, would require an annual supply of three hundred million gallons. It may be considered certain that, with a well regulated commerce, long before this supply can be provided for by the growth of our vineyards, at least that number will have been educated to resume civilized habits of life. I will leave it to conjecture as to what effect on the demand the rest of the population will create. The growth of the country will certainly count for a great deal, and if our producers will study the peculiar palates of the American people, they may look forward to the time when the viticultural industries of California may successfully produce for home consumption not less than one thousand million gallons of wine.

How many temporary disappointments they may encounter, owing to imperfect mercantile resources, dishonest trading, and their own lack of facilities for holding their vintages in their own cellars until trade demands more supplies, it is difficult to predict. I have refused to take into account, when questioned as to over-production, any probable temporary derangements of trade, which will affect the sale of wines for short periods; such difficulties attend upon the development of all new industries, and it is the part of wisdom to foresee and provide against them. This year there are a few sections of the State, where new crops are offered at extraordinarily low prices; the cause is not that production is overdone, but that production is not complete. There is a want in such places of wine makers to purchase

grapes, and the cost of transportation to other districts is great. The defect in the industry in such cases is in the minds of the planters, who should not have been encouraged to plant vineyards without contemplating also the manufacture of their own wines. Their necessities will bring about the proper remedies; if a few suffer from delay in realizing expected profits, their misfortune will not prove the failure of the industry.

The great majority of vine planters should intend to manufacture their own products. A few, exceptionally situated, may rely on the sale of grapes. This principle does not, as many suppose, apply only to the large producers, but more particularly to the small proprietors of twenty, thirty, and forty acres. In the latter case the vine-grower is less able to sacrifice a part of the profits of his industry than the owner of many acres, who may be satisfied with a small rate of revenue per acre to cover the interest on his investment. As a rule, the best wines will come from the small vineyards. We should have no one, as the planter of a wine vineyard, who has not the intelligence to make good wine.

It is not to the interest of viticulture that any conflict should spring up between the grape producer and the wine maker, as there must inevitably be if the two occupations are divided. The former will always lean towards the cultivation of varieties that give the least trouble and yield the largest crops; the latter will always endeavor to purchase the best quality for wine making at the least possible advance above average prices. The wine maker should control the time of picking fruit, and the proper proportions to be delivered at one time for fermentation. He cannot practically do this when he buys the crop of another. The grape producer, who sells his crop, throws the risks upon the manufacturer, who in turn attempts to shield himself by extra margins for profit. Moreover, the wine crop, when largely increased, can be more easily carried until matured, or until demanded for trade, by distributing it throughout a large number of small cellars, supported by the individual credits and capital of many people, than by concentrating it in the hands of a few. In other words, the producers cannot afford, while increasing their crops, to force all the risks upon a few capitalists. A multiplication of wineries and cellars for maturing wine will give stability to prices, and avoid unnecessary glutting at shipping points.

While the leading merchants are engaged in opening new markets and perfecting their facilities for distribution, the producers should not expect them also to furnish all the capital necessary for the storage and care of new wines. As much as possible, wines should be matured and stored where they are made, and the vine-growers should be the wine makers. Stable prices will depend largely upon these principles, and it would be well if all future planting should be governed by them. The profits of viticulture are endangered more by the competition of incomplete and carelessly planted vineyards than by the prospect of over-production.

High retail prices, false labels, and the refusal of hotels and restaurants to place wine in the same category, with respect to their profits, as tea, coffee, and milk, are great obstacles lying between the

producer and consumer; concerted efforts must be made without delay to overcome them. The producers must act in this matter, harmoniously, if possible, with the merchants. In large cities, the practice of furnishing wine at the family door, collecting and refilling empty packages and bottles, and instructing the people in the simple management of small stocks obtained in casks, should be inaugurated more extensively than is now known. The people, by means of circulars and advertisements and through the news columns of friendly newspapers, should be constantly advised as to the prices for which they can obtain good sound wine. They should be taught everywhere and repeatedly that wine at sixty cents per gallon, when bottled, represents a cost of only twelve cents per full bottle and six cents for a half, or so called pint; that bottles should not be reckoned in the cost by hotels and restaurants any more than tea and coffee cups, water pitchers and glasses; that the caterer who does not know enough to buy wine in barrels and to do his own bottling, wasting neither bottles nor corks, should send for a wine dealer to teach him; and that all pretensions of drinking celebrated brands in public houses, except on extraordinary occasions, should be considered proof of ignorant affectation and folly.

The hotel keeper who does not entertain his wine drinking guests as liberally as he does those who prefer tea, coffee, or milk at their meals, should be fought as an enemy of the vine-grower. The guest who pays a fixed price for his meal should not be forced to drink tea if he prefers wine. The railway traveler has a right to demand six cents' worth of wine—a pint bottle of good claret—with his fifty cent or seventy-five cent dinner. There is no hotel or restaurant in California that cannot afford to furnish a pint of good claret in place of or at the same price as a cup of tea or coffee. The only excuse that can be given by the proprietors of such houses for ill treating the best class of guests that they entertain is, that placing wine on the table and making known that it is really cheap, and satisfies the natural desire for stimulus, as well as provides the fruit acids required by the digestion, would interfere with the profits and popularity of the bar-room. If the many appeals that have been made to them to offer equal fare, according to the preference of guests, do not soon prevail, the vine-growers and their friends might seriously contemplate such a reform of public hostelries as shall prevent them from being conducted in the interest of the bar trade; it might possibly be questioned whether the two institutions should be licensed under one control.

This question of hotel fare is of more importance than that of merely securing hotel trade. At the hotel many people are educated in their habits of life while young, unmarried, or traveling. It is there that snobbish notions of fancy brands, and the idea that wine is an expensive luxury, are acquired; and it is there that temperate habits of wine drinking at meals, instead of bar-room tippling, might be formed. If the hotels and restaurants were the true friends of viticulture, the prospects of our industry and of civilizing the habits of the country, would be vastly increased. Their coöperation is a prize worth winning, and the way to do it is for the wine-growers of

each section to make their influence felt where they spend their money.

When consumers are taught that a good, sound, pure, ordinary claret, a *vin ordinaire*, without fancy label, or capsule, is good enough for the every-day drink of any gentleman, and that a selected wine of superior quality, *vin supérieure*, also without fancy name, is good enough for a Christmas dinner, they may think that they really know as much about wine as the experienced French epicures, whom they imagine they have been imitating, when they order their *St. Julien* and their *Chateau La Rose*. When they learn that their present stupidity and monkeyish epicurianism cause them to pay the landlord more profit on a bottle of wine than they do on a whole day's regular board and lodging, they will probably unite with us and make their influence also felt where they spend their money.

There will, doubtless, be a chance to begin soon to open a trade in certain grades of wines and brandy in London, Holland, St. Petersburg, and the seaports of South America. Our chances of competition will, probably, be best in the line of the best Rieslings, Sauternes, heavy colored clarets, port, sweet white wines, and brandy. France will probably restore her vineyards before we have much that her trade may demand. If not, we may sell to Bordeaux such blends as we can make with *Grosser Blauer*, *Mataro*, *Zinfandel*, and *Malbeck*. Our British cousins may be assured that our *Trousseau* (*Bastardo*) ports will meet with favor with even the Queen's wine merchant; but they must wait until our vines are a little older, which will not be long; and we know now that they will soon have an opportunity to harmonize their ideas with us, concerning the Panama Canal, over as good a bottle of pale brandy as their commercial hospitality to the good things of the world deserves. Their merchants, who establish their purchasing agents in Reims, Cognac, Bordeaux, Oporto, Xeres, and Madeira, will know how to make the best selections here, when the proper time arrives. Viticulture in California would welcome the arrival of representatives of the British wine trade, for they are in all foreign countries the best supporters of the honor of the industry, and respected as gentlemen at home.

SHIPPING GRAPES AND RAISINS.

The progress made in the cultivation of varieties of grapes for table use, and for curing into raisins, has been most satisfactory. As compared with wine production, these branches of our industry are relatively small; yet they already give employment to a large number of families and forwarding houses.

The popular taste for fruit is, however, not very critical at the present time, except as to appearances. The most delicately flavored grapes are not yet the most in demand. Even for the local markets large showy bunches produced on rich soils are the favorites. There are a few exceptions, but not enough to cause the planters to cater extensively in that direction. Crisp, slightly acid, little flavored, large, firm, and brightly colored berries, set in large clusters, represent one type of favorites; pronounced muscat aroma and the foxy taste

of the Isabella represent another; while for home use, the quality and dark skin of the *Black Prince*, or *Rose of Peru*, and *Black Malvasia* attract those who seem to appreciate that fruit is both food and luxury.

For eastern markets, good keepers and handsome clusters, with rosy, amber, and greenish colors, are sought with great energy by forwarding houses. The popular varieties for this trade are now *Moscatel* (the Malaga raisin variety), *Flame Tokay, Cornichon,' Black Ferrar*, and *Emperor*. No doubt there are many other suitable varieties which should be propagated to add attraction to the eastern fruit stands. The growers would do well to study them with this object in view. The illustrations of the *Vignoble*, which may be seen at the office of this Commission, and such collections as those of Mr. H. W. Crabb, at Oakville, Napa County, would aid to suggesting experimental cultures. This branch of viticulture can be extended as rapidly as the markets show continued demands, our resources being practically unlimited. For such purposes rich soils should be selected and care should be taken to avoid all irrigation that is not necessary to maintain the vigor of the vine. The general experience of the State tends to show that the fruit of vines, irrigated in Summer, is not as durable as that from unirrigated land. This rule may find, possibly, some exceptions in places where hot dry Summer winds assist the sap in evaporating its aqueous excess and in elaborating fruit acids and sugar.

Rapid transportation by rail has been provided for the forwarding trade, and it is to be hoped that lower freight rates may yet be granted. The producers, I believe, can perfect arrangements for preserving large quantities of certain varieties of grapes until Winter, when they would bring more profitable prices and prolong the markets. I am so convinced that this can be done that I intend to make some experiments this year.

The raisin industry received its first popular impulse from the attention that was attracted to the products of Mr. R. B. Blowers and Mr. G. G. Briggs, of Yolo County. The California Raisin Company ventured largely upon it in Placer County, and Riverside led off in the example for the young colonies of the southern part of the State. The *Moscatel*, imported by Colonel Haraszthy, is the variety that makes the true Malaga raisin and has been largely propagated under various names. No doubt there are some differences owing to other importations from nurseries in eastern States and Europe where the *Moscatel* has always found a place and where there are often associated with it the English seedling stocks. Concerning these differences confusion prevails, owing to the varying circumstances under which they are grown.

Inferior raisins have been made from the *Flame Tokay, White Malaga(?), Feher Szagos*, etc., but these should be discouraged. We cannot compete against Malaga raisins with any other than the *Moscatel*.

Many thousand acres of raisin grapes have been planted, but as the *Moscatel* repeats in California, more or less, its European history, it is probable that before long our experience will cause its culture to

be restricted to certain districts most favorable to its growth and fruitfulness. That the range of country is much larger here than in Spain for raisin culture is very certain, and results have demonstrated that with care in curing and packing, California can soon, if permitted to enjoy the same protection that is given to eastern industries, supply all that the markets of the Nation demand of as good average quality as the products of Spain.

Raisin and table grape culture will work harmoniously with the wine industry, relieving the latter of many tons of fruit that are unsuited to the wine press, and sending their surplus and inferior culls to the distilleries. The stocks planted for any viticultural purpose will from time to time, as circumstances and experience guide the owner, interchange their original destinies by means of grafting. Many *Moscatels* and table varieties will be grafted to wine grapes and *vice versa*.

The late crops of raisin grapes, which are worthless for the curing processes, or for shipping east, may be made into wholesome light dry wine for the families and workmen who do not prefer to purchase more tonic clarets. It would be advisable for the growers to plant a small area in *Mataro*, *Grosser Blauer*, and *Burger*, to mix with their refuse *Moscatels*, so as to provide a more refreshing and acceptable wine which, while not of the finest class, would be quite palatable to all who understand its origin and purity.

The *Sultana*, a seedless variety, succeeds more widely than the *Moscatel*. To what extent it will become popular will depend upon the demand of the market for Sultana raisins.

The *Corinths*, which make the currants of commerce, are being experimented with in many places with varying results. They will probably become restricted to a very few districts.

The Committee on Raisins, having in charge the preparation of the appeal of the industry for proper protection by Congress, will no doubt make a careful statement of all necessary details, which will be made public; therefore I shall not attempt to duplicate or forestall their work.

I have given special study this year to all questions that I could discover bearing upon the culture of the *Moscatel*, with a view, if possible, to indicating methods of preserving its fruitfulness in many places where it now appears to fail often. I shall reserve the discussion of the subject, however, for the proper places under the heads of pruning and ampelography.

EXTENT OF POSSIBLE VITICULTURE IN CALIFORNIA.

Climatic conditions are practically the tests of possible areas of arable land for viticulture in California. In a few cases the chemical constituents and physical conditions of soils, and the impossibility of obtaining water for irrigation in a few others, may prevent the growth and fruitfulness of the vine, where the climate is otherwise favorable. The vine flourishes and bears fruit, as Guyot says of France, in all geological formations; in the lightest sandy loams, heaviest black adobes, gravelly clays, and loams of all shades of color known to the

farmer, granitic, volcanic, calcareous, silicious, sedimentary, alluvial, etc. Given correct climatic circumstances, the physical conditions to be ascertained in determining a home for the vine are good drainage, especially of the subsoil, elevation above the line of severe late Spring and early Fall frosts, a surface soil sufficiently retentive of moisture which involves the question of depth and nature of subsoil, as well as of chemical composition; and, where irrigation is not practiced, either a deep friable, or penetrable subsoil, or rock stratum capable of maintaining a reserve supply of moisture, or such relations between soil, subsoils, and permanent surface water, not too near the top, as shall maintain moisture with proper cultivation by means of capillary attraction. Very shallow soils, overlying substrata of clay, rock, etc., impervious to roots, and especially on flat lands, where drainage is thereby impeded, and most unfavorable to the growth of the vine, and rich alluvions with permanent water near the surface, are most destructive of fruitfulness and the proper ripening of fruit and new wood. The few exceptions of soils, with respect to chemical constituents, are mainly comprised among those that are alkaline, or poisoned by the decomposition of certain roots and soured by want of proper aeration and drainage.

The essential climatic conditions consist in a maintenance of a certain regular annual range of heat, together with a comparatively dry atmosphere, especially during the period of vegetation. Constant atmospheric humidity, whether from rains and conditions preceding them, or from fogs, is fatal to viticulture. Either the rainfall must be sufficient to supply loss of moisture in the soil, or there must be conditions to supply the same without fail in all seasons by capillary attraction, or seepage from watersheds, or the deficit must be provided for by artificial irrigation. The essential quality of the climate of California, which extends the limits of viticultural areas, is the aridity of the Summer atmosphere combined with equable temperature and mild Winters. Where sufficient moisture is maintained in the soil, the more arid the atmosphere within the viticultural zone, and the more equable the temperature, the broader are the viticultural opportunities, and the more varied the resources.

These principles being understood, any practical observer may select within the territory of California a site where the vine may be made to flourish with proper cultivation. The area of possible viticulture, tested by no other rules, will be found to comprise at least two thirds of the arable land, or many million acres. The resources of the State with respect to viticultural area are practically exhaustless—vastly more than those of France. It is our dry Summer and broad latitude for the vine that gives this State an advantage over all other countries of the world.

SELECT LOCATIONS FOR VITICULTURE.

Experience has shown that, with reference to quality of products, certain soils, chemically and physically considered, under peculiarly favorable climatic influences, produce the best results. In this respect, also, the variety of vine, and the purpose for which it is cultivated,

further restrict the selection of the best locations. For certain results the area for successful cultivation of some varieties is comparatively very limited, while it may be very extended for others. Different varieties of vines have certain prescribed homes, and within their limits their qualities may so vary that for certain uses their limits of cultivation must be very carefully restricted.

Peculiar qualities of certain varieties of grapes control certain corresponding qualities, or characteristics of the products, whether considered in the state of nature, or changed by industry into raisins, wine, brandy, etc. Conditions of soil and climate may modify these characteristics; but in all cases of products of superior quality the first essential element of success tending towards any desired result is the proper selection and adaptation to soil and climate of the appropriate variety or varieties of vines.

Therefore, in considering what are select locations for vineyards within a broad viticultural area, we must determine several questions:

First—The varieties of vines that will prosper in a given place.

Second—The various possible products that may be obtained from either one or more of such varieties.

Third—Which of such products are of superior value.

Following this method of determining the areas for select locations, the greatest possible achievements may be estimated. Generally, however, careful vine planters have in view some particular type of products which they prefer to produce, and are already owners of the land to be planted. In this case they may have a select location for wine grapes, but prefer to cultivate table or raisin varieties; or they may have a fine site for raisin production, and prefer to produce a wine of Burgundy type; or they may have a choice place for fine Burgundy, and prefer to make sweet ports or sherry. In such cases they might fail altogether to produce what they desire, or only approximate the same from the commercial standpoint, while at the same time they have sacrificed the true value of an otherwise select location and diminished the viticultural reputation of the State.

Others may desire to purchase land for the cultivation of varieties for certain products, but may select places unsuited to their purposes. These, besides depriving the State of the advantages of their good intentions, well directed, add to the mistakes of the preceding, in increasing the production of inferior goods, and still further injure the prospects of commerce.

Others, also, ignoring that there are qualities of superiority inherent in different varieties, may, as many have done, estimate the value of what they select to plant by the sole test of quantity, and trust to the trade to find use for their crops. This class cannot, with very few exceptions, avoid falling into errors that degrade quality, and tend to defeat the ends of commerce by disappointing or disgusting consumers.

Admitting that viticulture might fall into all these errors, part unintentionally, part heedlessly, the result would be that practically there would be no choice vineyard locations, and competition with viticulture of other countries, governed by experience and intelligence, would be impossible in all except the line of inferior goods.

Another possibility is worth reflection. Admitting that there are within the State many millions of acres on which viticulture may thrive, of which only a part is suited to produce the finest results, and that the demand for our products will not justify the cultivation of more than a comparatively small portion of the entire area in vines, it might happen that the lands selected for vineyards will all, or nearly all, be of inferior quality. In that case, from a brilliant possibility viticulture would descend to the level of an unpromising fact.

It is scarcely worth while saying that in the event of the selection in all cases of the most favorable locations and of their devotion to the types of products possible of attainment in the highest degree of perfection, care being taken, where choice is practicable, to avoid over-production in those directions where markets are most limited, viticulture would achieve its most brilliant successes, danger of over-production would be practically avoided, profits of producers would be insured, and commerce would be facilitated by the popularity of products.

Having reflected on these possibilities, viticulturists will find it easy to draw the following conclusions without danger of being considered partisan or prejudiced:

First—That only a portion of the possible viticultural area of California can within this generation be profitably cultivated in vines.

Second—That for certain desired products only comparatively limited areas have special advantages for the production of superior quality, and, in some cases where quality can be assured, there are economical differences as to facilities for transportation and labor supply.

Third—That products of superior quality will command the best prices and readiest sale, as compared with inferior goods of the same types.

Fourth—That so long as profitable prices are paid for goods of superior quality, the progress of plantation in districts where they may be produced will probably continue.

Fifth—That whenever over-production occurs, inferior products will be rejected by commerce, unless ruinous competition has made production of the finest articles unprofitable, in which case, all will suffer to some extent.

Sixth—That owing to the possibility of over-production of inferior goods, it is the part of wisdom to counsel planters to strive to produce those types of commercial value which will find the readiest markets, and for which their lands and facilities are best adapted.

To accomplish these desirable results, those who own land which they desire to plant, should abandon all prejudices as to preferred products, which they have least chances of attaining, and either abandon viticulture or devote their resources to their best probable advantages. And those who desire to purchase lands for the purpose of engaging in the production of certain preferred types, should be careful to select locations most favorable to the culture desired, facilities for transportation and labor, as well as soil and climate, being considered.

THE CHEMICAL CONSTITUENTS OF SOILS.

It is too early in the history of viticulture in California to pretend to classify the soils best adapted for the production of the finest results from the standpoint of chemical analysis. No general rule for close application can be deduced from the experience of other countries, and our own experience is yet too limited. Chemistry does not even reveal the secrets which control the marked difference of quality between the wines of many neighboring vineyards in the old world, where the question of cause has long been mooted.

The planter should dismiss entirely from his mind, so far as he is controlled by practical desires, the notion of attaining to the distinction of remarkably fine and locally celebrated wines. His practical aim may be to produce a type of fine average excellence within a given district of general average conditions. The happy selection of a spot destined to be celebrated may partly be due to his own careful study of analogies, but will be mainly due, with respect to other apparently equally fine localities, a matter of chance. Careful selection may bring him within the charmed circle of lottery prizes, but his may not prove the highest on the list.

It is more than probable that the chemical constituents of soils have less to do in causing the fine distinctions that are noticeable to connoisseurs in wines of neighboring growth, than the varying physical conditions, such as depth, drainage, elevation, shelter from or exposure to certain atmospheric influences, preorganic history of the humus and vegetable mold, and slightly varying proportions and sporting developments of the varieties of vines cultivated.

Chemistry, together with careful observation of the physical conditions of soils and local climatic conditions, may indicate the general features of a wine district capable of producing a general average result, similar to some desired local average product. For instance, there is sufficient common resemblance within each class of the local wines of the Médoc, Sauterne, Burgundy, Xeres, the Rhine, the Champagne district, Roussillon, and the brandies of Cognac, notwithstanding the fine distinctions drawn between those of different vineyards, to constitute what we may call local district types. In the attempt to reproduce, or approximate, or rival any one of them, we may derive some advantage from the chemical analysis of soils.

However, the exact counterpart of the soil of Johannisberg on the Rhine, with the same varieties of vines, would assuredly fail to produce the same fine results in the climate of Nice or Roussillon. Hence the first consideration must always be that of climatic influences and physical conditions. Then chemistry may lead to approximate conclusions. Chemistry could not find a vineyard on the Rhine, nor in Napa County, of this State, for the production of Malaga raisins. How far climate will influence the production of desired types, where soil is satisfactory, and the varieties of vines are properly selected, experience only can prove. I have proceeded, in giving advice as to the selection of types, on the theory that the history of any given variety of vine in other countries will reveal the surest and safest

guides to follow; and I have always advised planters to follow those indications of success, which are comprised within the greatest number of points of resemblance to their own localities, and those of regions where certain varieties have become popular in other countries. Thus I find the celebrated *Moscatels*, *Corinths*, *Cabernets*, *Pinots*, and *Rieslings*, very restricted in European culture. Some experience in this State with the same varieties tends to demonstrate the same destiny as possible for them here; and I find that the general rules governing their restriction, both here and in Europe, so far as any experience is recorded, point to certain climatic influences and physical conditions of soil as the true secrets of success and failure, rather than to noticeable differences revealed by chemistry. Certain other observations, with reference to certain types of wine, reveal less importance in the study of varieties, and more in the study of chemistry and climate. This is applicable, particularly, to sherries and ports, although in them, also, variety of vine rules the quality, though a given variety may not be as necessary to produce the commercial type

I shall not pursue these observations any further, having outlined sufficiently the general principles that should govern the selection of locations with reference to certain desired results, recognizing the relative importance of different means to that end.

SUGGESTIONS

CONCERNING

The Development of Commerce in Viticultural Products in the United States.

(Prepared especially for this edition.)

In addition to the information contained in the foregoing extracts, the following suggestions have been prepared for publication in this pamphlet, especially designed to attract the attention of those visitors at the New Orleans World's Fair who may be inclined to studies of an industrial nature, or who may wish to learn what opportunities are opened by viticulture for the investment of capital.

The work of this Commission does not prominently include any idea of promoting immigration to California; such occupation belongs to the duties of other public and private bodies. Our effort is to proclaim present achievements in our industry, point out defects and the means of remedying the same, to collate and produce information tending towards the advancement of our prosperity, and to attempt, when necessary, to induce the full development of all departments of enterprise directly and indirectly connected with our success. If this shall sometimes lead us to seek the attention of people who are at present not intimately acquainted with possibilities and necessities of production and commerce in California, we may at least claim the merit of suggesting fixed plans of action for those who are in condition to engage in new enterprises.

Sufficient progress has been made in viticulture in California to demonstrate the possibility of creating an industry equal to if not greater than anything that has been achieved of similar nature by any other nation of the world. The questions of quality of products have already been well investigated, and there remains only to be considered the energy and will to apply the lessons that have been learned, provided that markets for our products are assured and mercantile facilities are ample. Intimately associated with the mercantile branches of the industry is necessarily the utilization of expert labor and talent in the management of our products.

Let it be assumed that the vine-growers of California, including those new accessions constantly coming to the State for the purpose of finding pleasant and prosperous homes, shall, with progressing knowledge and experience, succeed in producing qualities of wines, brandies, raisins, and table fruit satisfactory to great markets and equal to all demands; yet there are two important questions to be solved before success such as is hoped for is attained.

First, we must consider the possibilities of commerce in seeking

consumers, or, in other words, the extent to which markets may be increased.

Known demands for anything, except the actual necessities of life, are seldom, if ever, in excess of supply. There was no known demand for the fresh fruit of California until our orchardists and vine growers came, with their goods, into the markets of eastern and western States and the Territories. More pertinently, we should say that this demand was not known until skillful forwarding merchants had undertaken the risk of tempting the natural desires of the people. We cannot to-day even approximately estimate the extent to which such enterprise, aided by improved facilities for transportation and retail trade, may increase the markets for our fresh fruits. The systematic excitement and supply of the natural desires of a great nation, backed by a producing energy always a little in advance of mercantile enterprise, and agricultural resources practically unlimited, may even astonish our own generation by the greatness of our commerce.

Our market for raisins is one growing with the prosperity of our people and the increase of population, without any known increase of danger from competition. In this branch of viticultural industry a steady healthful progress is assured free from undue excitement; its mercantile resources are easily organized, without much novelty in experiment to contend with.

With respect to wines, especially those staple grades intended for home consumption at the table, not as luxuries, nor as extraordinary accessories of conviviality, there are a number of serious questions to consider. Admitting that the customs of the people are formed by natural desire, educated habit, and opportunity, and that where the opportunity to form the habit of wine drinking as the regular and ordinary part of the daily meal has existed, natural desire has always resulted in the educated habit, except under certain restraining ecclesiastical influence such as that experienced within Mohammedan civilization. We may safely assume that in these United States our people would become habitual wine consumers if proper opportunity were offered, within the time of one generation. To explain this proposition to people of intelligence would be a waste of words; we may therefore confine ourselves to the questions of ample production and opportunity to form the habit on which the future commerce must depend

Studying the taste of consumers, who have already had the good fortune to form this civilized habit, our producers are rapidly improving their vineyards and their methods of vinification, so as to be able to satisfy expected demands. That they will succeed is not to be questioned, for we, in California, have seen evidences of progress that commerce in general is not yet aware of.

We may say with certainty, that we shall be able to produce the satisfactory material for commerce, and that the field for the development of markets is equal to our enterprise in production. The only weakness in our industry lies in the want of adequate development of those commercial relations, which are necessary to bring consumers and producers together, and to supply the link of opportunity.

Within this department of activity are thousands of places for the employment of intelligent labor and capital, and it is to them that we especially invite public attention.

It will be necessary to so control and distribute the vintages of our State that wine shall cease to be an expensive luxury beyond the reach of the everyday desires of the great masses of our people; wine must be both cheap and accessible, as it must be also presented pure, wholesome, and palatable. This will necessitate the organization throughout the country of a legitimate and distinct wine trade in all its branches from wholesale to retail, and the obliteration of present customs which prevent the use of wine except as a luxury. It will need also ample protection by the Government against fraud, imposition, and adulteration.

Wines must first be fermented in the country where the grapes are grown; then they must be stored in cellars, to acquire proper maturity, one or more years, either at the vineyards or in establishments of those who purchase the new wines to mature for future sales. The progress of planting vines in California during the last four years has been much in advance of the development of suitable accommodations for the storage and care of the products; in many places even in advance of facilities for the first fermentations. This difficulty has been already apparent, during the vintage of 1884, and more particularly during the Winter and Spring following, when wine makers have been seeking to dispose of their products, not yet ready for the consumer, to those who have been accustomed to receive and care for new wines. Our vintage of 1884 has been generally estimated at fifteen million gallons, or about five millions in excess of the average of several preceding years. This excess, if adequate storage and cellar management were provided, would prove an immense advantage to our trade, by causing a reserve to be withheld from sale until properly matured. Heretofore only a small portion of our vintages has been matured before shipment to market, the demand having prevented reserves from being kept back. But our industry now feels the want of more wine makers among the vine-growers, more cellars for storage, and more mercantile resources for controlling the vintages. Our Commission has appealed to the vine-growers to engage in wine making to utilize their own crops, and not to depend upon the sale of grapes to wine makers; also, to provide at the vineyard good cellarage for at least one vintage, while another is in progress, so as to have wines at least one year old before they are offered on the market. This advice applies mainly to the large number who have engaged in vine planting during the last four years. Among the older vine-growers there are many who make up their own wine, but there are few who have facilities for storing and maturing a vintage, the rule having prevailed to sell new wines to merchants during the Winter and Spring following the first fermentation, so as to make room at the winery for the next crop. Many vine-growers will not have the means to accomplish what is needed, therefore there is immediate demand for independent wine making establishments, as well as also for storage cellars. Wine makers may buy grapes and sell or store their products. Cellarage may be managed either by

those who produce or buy new wines, or for the accommodation of producers, who will pay for storage and may, even, borrow money on their goods, when so placed as to constitute good collateral security. There is, therefore, a good opportunity in this State for the investment of large or small amounts of capital in wine making, storage, and the purchase of new wines.

To measure the extent of this last mentioned opportunity, we have only to briefly estimate the probable products of the next few years, based on a knowledge of the new acreage of vines coming into bearing. In 1884 we produced, as estimated roughly, not less than fifteen million gallons, and have far less facilities for storage than we require, with even in many places very imperfect means for conducting fermentations. This quantity will rapidly increase each year; the vintage of 1885 will not be less than twenty million gallons, probably considerably more. In 1888 we now estimate that we shall probably have fifty million gallons, and under certain contingencies of the season we may have even sixty or seventy million gallons. This rapid increase will no doubt force a large reserve into storage, while merchants are organizing their trade, until probably in 1888 there will be required for cooperage for the new crop of that year, together with the reserve, a capacity for at least one hundred million gallons. A portion of this will undoubtedly fall into the control of eastern cellars that will be built for the reception of new wine, but the question of opportunity remains the same, whether the enterprises are conducted in this State or elsewhere. There are many people throughout the United States who are familiar with the proper management of wine cellars, especially among those who acquired their knowledge in Europe; there are many practical men who know that with capital well directed they can employ expert labor at command; and there are many who know that the establishment of a wine trade in any city must begin with the creation and economical management of commodious cellars suitable for the purpose. To such people these suggestions are addressed, as well as to those who may invest in enterprises having in view the building of large cellars at convenient points in this State, where storage room may be rented and where capital can find ample security in making loans. Such schemes are already being broached here and must soon take form.

The next great question involved in the development of opportunity for the benefit of the consumer, and the creation of markets, will be in localizing distributing wine cellars in all populous parts of the United States, wherever civilized habits have not been forbidden by law. There are few cities or towns in the United States to which a consignment of even a few thousand gallons of wine could be made with safety, and knowing that it would fall into the hands of a competent cellar-master in command of a properly equipped and arranged cellar. To develop a legitimate wine trade there must be good wine cellars in all centers of population; and all retailers must learn how to care for even small lots that they may have to dispose of. Each one, who attempts to open a trade in wine, should be careful to instruct his customers how to care for the goods they buy, and how to economize in the expenses of distribution, so that consumers may obtain good sound

wine at cheap prices. The consumer also must be taught how to receive, draw off, and bottle wine from the barrel at the least possible cost. In every populous part of our common country there may be found a good market for wine, if the trade is managed properly and not as a mere adjunct of the whisky depot, or grocery store. Long before this state of commerce can be well organized there will be good stocks of matured wines to procure in California, and many who understand, or who will study the business, may begin even now to lay in stocks of new wines, properly caring for them until they are fit for consumption. Here are opportunities for engaging in a branch of our industry, without coming to California, open to people in every city and town.

Meanwhile, those who intend to foster the legitimate wine trade of the United States, should begin without delay to use their influence to break down the unjust custom of retailers, especially hotel and restaurant keepers, who demand extortionate profits on the sale of wines. The rule must soon be, as our productions demand recognition, that the wine drinker shall be treated as fairly as the tea and coffee drinker. This subject has been discussed fully in the report from which extracts have already been given in this pamphlet.

There will be also an opportunity for the development of a lesser trade in fine brands, suitable for bottling and a select custom. Wines for such purpose must be selected carefully from large stocks, such as will be found in California, the relative proportions of the finest qualities rapidly increasing as new vineyards come into bearing.

A foreign trade to some extent will also find a foothold, and if British merchants do not seize upon the opportunity to establish purchasing agents here, with distributing houses in London, they will do otherwise than has been their custom in dealing with other countries.

Brandies will become graded, not only as to locality of production, but also and more especially with reference to the quality of grapes from which they are made; the trade should make a marked distinction also between brandy distilled from pomace, the residuum after pressing wine, and that resulting from wine fermented for the purpose of distillation. The Internal Revenue regulations should also enable both consumer and dealer to distinguish between pure grape spirits and compounds of grain and grape spirits, such as are commonly sold under the wholesale liquor dealer's stamp.

The producers in California are prepared to experience some disorder and difficulty during the next few years, during which a great trade is forming to meet the demands of rapidly increasing production, and will not be discouraged by temporary difficulties. Those who are not prepared to control their own vintages until ready for trade or consumption, will possibly suffer temporarily in prices realized; but from such troubles the industry will not suffer any material or permanent retrogression, nor will new plantations made with discretion be retarded.

The class of labor that is most needed in California to assist in our vineyard work is that which brings the family, accustomed to country

life, and sufficient means to purchase small lots of land in the midst of vineyards, where they may employ part of their time for themselves and part for the vine-growers. Other agricultural operations afford, also, employment to such people, who may come here with safety. The rover, without intention of establishing a home for himself, is a disadvantage to himself, and only a make-shift to his employer. With from one to five acres of choice land in the immediate vicinity of communities of vine-growers, the settled family of agricultural working people will become prosperous in California. Such lands are to be had at all prices, according to quality and situation; but, as a rule, the highest priced are the best suited for such homes, and also the most surely profitable. Such families may engage on a small scale in the culture of vegetables, small fruits, orchard trees, vines, and in rearing domestic animals and poultry. In future they will, in many cases, also take to silk production as an accessory to other employment. It is a mistake to encourage these people to seek wild mountain lands, however cheap, that are inaccessible to markets for products and centers of employment. Many of them, thus falsely directed, make failures, and live miserably until they abandon the possessions, which they are unable to develop, and seek employment where they can utilize their energies to their best advantage.

Hoping that these suggestions may be read by some who will apply them practically to their own benefit, and the further advancement of our industry, and that all who read this pamphlet may reflect upon the great blessing which viticulture will prove to the civilization of our country, the writer also sincerely wishes good fortune to fall to the lot of all the noble industries, stimulated in action by the World's Fair at New Orleans, and especially to our younger sisters in the sunny South.

CHAS A. WETMORE,
Chief Executive Viticultural Officer.

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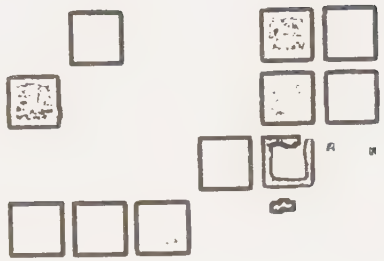

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